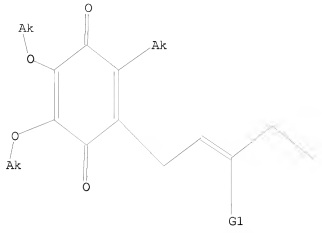
L1 STRUCTURE UPLOADED

=> d L1
L1 HAS NO ANSWERS
L1 STR



G1 Me,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu,H

Structure attributes must be viewed using STN Express query preparation.

=> s L1 SSS SAM
SAMPLE SEARCH INITIATED 20:50:03 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 36 TO ITERATE

100.0% PROCESSED 36 ITERATIONS 19 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 360 TO 1080
PROJECTED ANSWERS: 119 TO 641

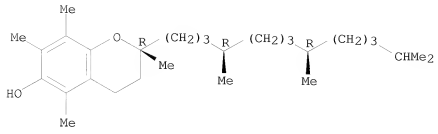
L2 19 SEA SSS SAM L1

=> d scan L2

L2 19 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN 2,5-Cyclohexadiene-1,4-dione, 2-(3,7,11,15,19,23,27,31,35,39-decamethyl-2,6,10,14,18,22,26,30,34,38-tetracontadecaenyl)-5,6-dimethoxy-3-methyl-, (all-E)-, mixt. with [2R*(4R*,8R*)]-3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-1-benzopyran-6-ol (9CI)
MF C59 H90 O4 . C29 H50 O2
CI MXS

CM 1

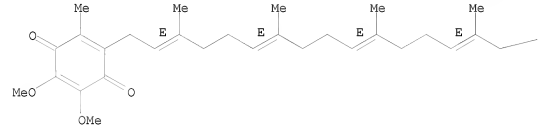
Relative stereochemistry.



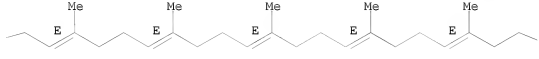
CM 2

Double bond geometry as shown.

PAGE 1-A



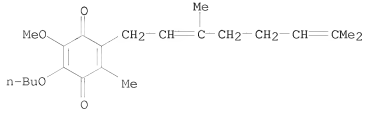
PAGE 1-B



PAGE 1-C

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):3

L2 19 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN 2,5-Cyclohexadiene-1,4-dione, 2-butoxy-5-(3,7-dimethyl-2,6-octadienyl)-3-methoxy-6-methyl- (9CI)
MF C22 H32 O4

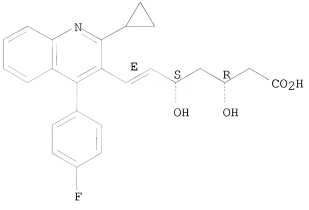


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 19 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN INDEX NAME NOT YET ASSIGNED
MF C59 H90 O4 . C31 H52 O3 . C25 H24 F N O4 . 1/2 Ca
CI MXS

CM 1

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

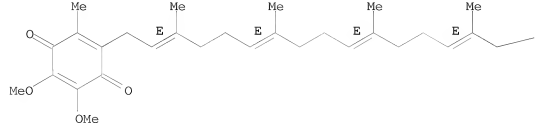


●1/2 Ca

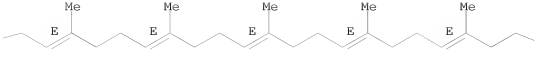
CM 2

Double bond geometry as shown.

PAGE 1-A

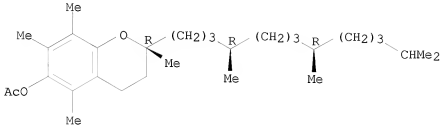


PAGE 1-B



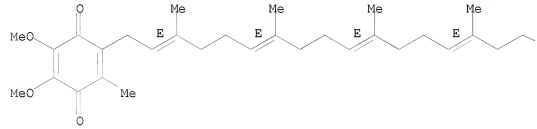
CM 3

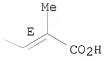
Absolute stereochemistry.



L2 19 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN 2,6,10,14,18-Eicosapentaenoic acid, 20-(4,5-dimethoxy-2-methyl-3,6-dioxo-1,4-cyclohexadien-1-yl)-2,6,10,14,18-pentamethyl-, (all-E)- (9CI)
MF C34 H48 O6

Double bond geometry as shown.





PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> d his

(FILE 'HOME' ENTERED AT 20:49:06 ON 07 MAY 2008)

```
     FILE 'REGISTRY' ENTERED AT 20:49:18 ON 07 MAY 2008
L1               STRUCTURE UPLOADED
L2            19 S L1 SSS SAM

=> s L1 SSS FULL
FULL SEARCH INITIATED 20:50:33 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      719 TO ITERATE

100.0% PROCESSED      719 ITERATIONS                             371 ANSWERS
SEARCH TIME: 00.00.01

L3           371 SEA SSS FUL L1

=> file caplus, casreact, beilstein
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                             178.82     179.03

FILE 'CAPLUS' ENTERED AT 20:50:47 ON 07 MAY 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'CASREACT' ENTERED AT 20:50:47 ON 07 MAY 2008
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BEILSTEIN' ENTERED AT 20:50:47 ON 07 MAY 2008
COPYRIGHT (c) 2008 Beilstein-Institut zur Foerderung der Chemischen Wissenschaften
licensed to Beilstein GmbH and MDL Information Systems GmbH

=> s L3
L4         6145 L3

=> s L4 (P) (synthe? or prepar?)
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L5 (P) '
L5          580 L4 (P) (SYNTHE? OR PREPAR?)

=> s L5 (P) (solanesol?)
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L9  (P) '
L6           17 L5 (P) (SOLANESOL?)

=> dup rem L6
DUPLICATE IS NOT AVAILABLE IN 'BEILSTEIN'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L6
L7            15 DUP REM L6 (2 DUPLICATES REMOVED)

=> s L7 NOT pd>20010419
L8             0 L7 NOT PD>20010419

=> s solanesol
L9          492 SOLANESOL

=> s L9 and (ubiquinone or ubisemiquinone or CoQ10 or (coenzyme(2A)Q(2A)10) or
ubidecarenone)
L10          48 L9 AND (UBIQUINONE OR UBISEMIQUINONE OR COQ10 OR (COENZYME(2A)
                Q(2A) 10) OR UBIDECARENONE)
```

```
=> s L10 and isodecaprenol
L11           4 L10 AND ISODECAPRENOL

=> d L11 1-4 TI AB IBIB HITSTR

L11  ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Process for the preparation of ubihydroquinones and ubiquinones
AB   A process was disclosed for the preparation of coenzymes CoQ9 and CoQ10
     I {R = [CH2C:C(Me)CH2]nH-(all-E), n = 9, 10, resp.}, and their related
     ubihydroquinones II (R1, R2 = OH, OMe) via condensation reactions of
     corresponding isoprenols HO[CH2C:C(Me)CH2]nH-(all-E) (n = 9, 10) and
     hydroquinones III in the presence of 0.005 - 1.0 mol% of a catalyst which
     is a Broensted-acid, a Lewis-acid from the group consisting of a derivative of
     Bi or In or an element of group III of the periodic table of the elements,
     a heteropolyacid, an NH- or a CH-acidic compound, and optionally oxidizing
     the ubihydroquinone obtained.  Thus, CoQ10 was prepd with 47.4%
     yield by refluxing of 2,3-dimethoxy-5-methylhydroquinone III (R1 = R2 =
     OH) with isodecaprenol and Sc(OSO2CF3)3 in n-hexane and
     nitromethane followed by oxidation of the heptane phase of the reaction mixt
     with Ag2O.
ACCESSION NUMBER:         2007:171912  CAPLUS
DOCUMENT NUMBER:          146:229489
TITLE:                    Process for the preparation of ubihydroquinones and
                          ubiquinones
INVENTOR(S):              Aquino, Fabrice; Bonrath, Werner; Bohrer, Patrick;
                          Hugentobler, Max; Netscher, Thomas; Radspieler,
                          Alexander
PATENT ASSIGNEE(S):       DSM IP Assets B.V., Neth.
SOURCE:                   PCT Int. Appl., 20pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
     WO 2007017168        A1    20070215    WO 2006-EP7645         20060802
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
             KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,
             MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,
             SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
             US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
     EP 1915333           A1    20080430    EP 2006-776559         20060802
         R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
     KR 2008033533        A     20080416    KR 2008-705736         20080307
PRIORITY APPLN. INFO.:                      EP 2005-17374       A  20050810
                                            WO 2006-EP7645      W  20060802

OTHER SOURCE(S):          MARPAT 146:229489
REFERENCE COUNT:          1     THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
TI Preparation of isoprenoid derivatives such as coenzyme Q10 from hydroquinones and prenyl alcohols
AB Isoprenoid derivs. I (R1 = lower alkyl; R2 = H, lower alkyl; n ≤ 10) such as CoQ10, useful for treatment of cardiac infarction, etc., are prepared by treating hydroquinones II (X = pH; R1, R2 = same as above) with R3(CH2CH:CMeCH2)n-1H [R3 = CMe:CHCH2OH, CMe(OH)CH:CH2; n = same as above] in the presence of sulfolane and Lewis acids and oxidizing the resulting II [X = (CH2CH:CMeCH2)nH; R1, R2, n = same as above]. Thus, BF3-Et2O was added dropwise to a mixture of decaprenyl alc., 2,3-dimethoxy-5-methylhydroquinone, sulfolane, and hexane at 45° over 30 min and the reaction mixture was further stirred at 45° for 10 min. After removing the solvent from the reaction mixture, the oily residue was treated with Ag2O in ether for 3 h to give 72.1% CoQ10 .

ACCESSION NUMBER: 2007:54433 CAPLUS
DOCUMENT NUMBER: 146:142855
TITLE: Preparation of isoprenoid derivatives such as coenzyme Q10 from hydroquinones and prenyl alcohols
INVENTOR(S): Yamane, Hiroyuki
PATENT ASSIGNEE(S): J Farumatekku K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007008886	A	20070118	JP 2005-193266	20050701

PRIORITY APPLN. INFO.: JP 2005-193266 20050701
OTHER SOURCE(S): CASREACT 146:142855; MARPAT 146:142855

L11 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
TI Synthesis of coenzyme Q10, ubiquinone
AB Processes for the stereospecific synthesis of coenzyme Q10 (all E isomer), ubiquinone, are disclosed based on a semisynthetic procedure using solanesol derived from tobacco waste as the starting material. The process of the invention results in high yields of isometrically useful compns. containing the optically pure isomers. Compns. containing coenzyme Q10 can be used for treating impaired or damaged tissue in humans and animals. The synthesis of coenzyme Q10 starting from solanesol is described. Solanesol in turn was obtained from tobacco dust and converted to solanesylacetone by a series of steps. The solanesylacetone was subjected to Grignard reaction with vinyl magnesium bromide and the isodecaprenol obtained was converted to E-coenzyme Q10 in a series of steps.

ACCESSION NUMBER: 2002:814893 CAPLUS
DOCUMENT NUMBER: 137:316103
TITLE: Synthesis of coenzyme Q10, ubiquinone
INVENTOR(S): West, Daniel David
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020156302	A1	20021024	US 2001-837320	20010419
US 6686485	B2	20040203		
US 20040151711	A1	20040805	US 2003-700424	20031105
PRIORITY APPLN. INFO.:			US 2001-837320	A3 20010419

L11 ANSWER 4 OF 4 CASREACT COPYRIGHT 2008 ACS on STN
TI Preparation of isoprenoid derivatives such as coenzyme Q10 from hydroquinones and prenyl alcohols
AB Isoprenoid derivs. I (R1 = lower alkyl; R2 = H, lower alkyl; n ≤ 10) such as CoQ10, useful for treatment of cardiac infarction, etc., are prepared by treating hydroquinones II (X = pH; R1, R2 = same as above) with R3(CH2CH:CMeCH2)n-1H [R3 = CMe:CHCH2OH, CMe(OH)CH:CH2; n = same as above] in the presence of sulfolane and Lewis acids and oxidizing the resulting II [X = (CH2CH:CMeCH2)nH; R1, R2, n = same as above]. Thus, BF3-Et2O was added dropwise to a mixture of decaprenyl alc., 2,3-dimethoxy-5-methylhydroquinone, sulfolane, and hexane at 45° over 30 min and the reaction mixture was further stirred at 45° for 10 min. After removing the solvent from the reaction mixture, the oily residue was treated with Ag2O in ether for 3 h to give 72.1% CoQ10 .

ACCESSION NUMBER:	146:142855 CASREACT
TITLE:	Preparation of isoprenoid derivatives such as coenzyme Q10 from hydroquinones and prenyl alcohols
INVENTOR(S):	Yamane, Hiroyuki
PATENT ASSIGNEE(S):	J Farumatekku K. K., Japan
SOURCE:	Jpn. Kokai Tokkyo Koho, 6pp. CODEN: JKXXAF
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007008886	A	20070118	JP 2005-193266	20050701
PRIORITY APPLN. INFO.:			JP 2005-193266	20050701
OTHER SOURCE(S):		MARPAT 146:142855		

=> d his

(FILE 'HOME' ENTERED AT 20:49:06 ON 07 MAY 2008)

FILE 'REGISTRY' ENTERED AT 20:49:18 ON 07 MAY 2008
L1 STRUCTURE UPLOADED
L2 19 S L1 SSS SAM
L3 371 S L1 SSS FULL

FILE 'CAPLUS, CASREACT, BEILSTEIN' ENTERED AT 20:50:47 ON 07 MAY 2008
L4 6145 S L3
L5 580 S L4 (P) (SYNTHE? OR PREPAR?)
L6 17 S L5 (P) (SOLANESOL?)
L7 15 DUP REM L6 (2 DUPLICATES REMOVED)
L8 0 S L7 NOT PD>20010419
L9 492 S SOLANESOL
L10 48 S L9 AND (UBIQUINONE OR UBISEMIQUINONE OR COQ10 OR (COENZYME(2
L11 4 S L10 AND ISODECAPRENOL

```
=> d que L10
L9           492 SEA SOLANESOL
L10           48 SEA L9 AND (UBIQUINONE OR UBISEMIQUINONE OR COQ10 OR (COENZYME(
                 2A) Q(2A) 10) OR UBIDECARENONE)


=> d L1
L1 HAS NO ANSWERS
L1                STR
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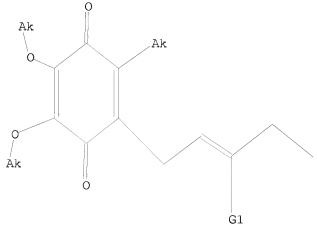

G1 Me,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu,H

Structure attributes must be viewed using STN Express query preparation.